Ethan Gates

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EDUCATION

Bachelor's degree in Computer Science, Western Governors University Completed: Feb 2025

TECHNICAL SKILLS

- Programming languages: Python, JavaScript, SQL, Java, C#, HTML/CSS
- Frameworks and Libraries: React, FastAPI, Spring Boot, NumPy, Matplotlib, Pandas, TensorFlow
- Tools: Visual Studio Code, PyCharm, Docker, Git/GitHub, Microsoft Excel, Word, and Power BI
- Cloud & Services: Google Cloud, Azure, Railway, Vercel, Cloudflare Tunnels, Firebase, PostgreSQL, SQLite

INDEPENDENT PROJECTS – Hosted on my personal website

- **ArXiv Dashboard**: Developed an arXiv explorer with FastAPI + React and RAG-based Q&A (FAISS + Gemini). Deployed backend on Raspberry Pi via Cloudflare tunnel with cron-based DB updates. Cut LLM latency by 83% via async, batching, and vector search optimizations. **[Demo]**
- **News Bias Analyzer**: Built a full-stack ML web app (FastAPI + Next.js) to detect news bias and misinformation. Achieved 74.3% bias classification accuracy and 99.99% fake news detection using OpenAI embeddings and DNNs. **[Demo]**
- **Stock Portfolio Analysis Tool**: Built a full-stack portfolio backtesting app (FastAPI + React) with Dockerized backend deployed on Azure and responsive frontend on Netlify. **[Demo]**
- **Mental Math Website**: Developed mentalmath.site (in progress), a full-stack math game platform using React, FastAPI, and PostgreSQL. Implemented Firebase Auth for secure login, persistent user progress tracking, and scoreboards. Deployed backend on Railway with a custom domain via Cloudflare Tunnels.
- **Book Recommendation Engine**: Created a recommendation system using OpenAI embeddings on 45K+ book summaries and reviews, with FAISS-powered similarity search. Deployed via Flask (Google Cloud) and React (GitHub Pages). **[Demo]**

CERTIFICATIONS

- ITIL 4 Foundations - November 2023
- Linux Essentials - January 2025

PROFESSIONAL EXPERIENCE

Caregiver, Accra Home Care, Minnesota 09/2022-Present

Built medication and supply tracking tools in Google Sheets to streamline patient care and daily inventory. Developed a medication reminder system using scheduled cron jobs to text refill alerts.

Team Trainer, Chick-Fil-A, Minnesota 05/2021-Present

Conducted onboarding assessments, trained 10+ new hires across multiple roles, and supported performance reviews to improve team readiness and service quality.

EXTRA-CURRICULARS

- Northland Hackathon Participant (April 2025)**:** Collaborated with other students in a virtual hackathon to build a working web app prototype in under 5 hours.
- National Number Knockout: Won 1st place in the United States in 2017. This math competition tests mental math skills and creative problem-solving abilities.